



**DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)**

**MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION**
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/pera/

**Marvin Windows and Doors
Highway 11 West (P.O. Box 100)
Warroad, MN 56763-0100**

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "StormPlus IZ4 Clad Casemaster Picture" Aluminum Clad Wood Fixed Window - L.M.I.

APPROVAL DOCUMENT: Drawing No. **1536**, titled "Clad Casemaster Picture StormPlus IZ4", sheets 1 through 10 of 10, dated 04/02/08, with revision A1 dated 10/17/11, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # **08-0213.08** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Manuel Perez, P.E.**



**NOA No. 11-1021.10
Expiration Date: July 03, 2013
Approval Date: December 22, 2011
Page 1**

Marvin Windows and Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **1536**, titled "Clad Casemaster Picture StormPlus IZ4", sheets 1 through 10 of 10, dated 04/02/08, with revision A1 dated 10/17/11, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.

B. TESTS

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of Storm Plus IZ4 Casemaster aluminum clad wood fixed window, Units 3, 8, 9, 11 & 12, prepared by Architectural Testing, Inc., **ATI-77780.01-201-18**, dated 01/28/08, signed and sealed by Joseph A. Reed, P.E.
(Submitted under NOA# 08-0213.08)

C. CALCULATIONS


1. Anchor verification calculations and structural analysis, complying with FBC-2007 and FBC-2010, prepared by prepared by W. W. Schaefer Engineering & Consulting, P.A., dated 02/14/08 and updated on 10/17/11, signed and sealed by Warren W. Schaefer, P.E.
2. Glazing complies with ASTM E1300-04

D. QUALITY ASSURANCE

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA).

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **10-0413.04** issued to E.I. DuPont DeNemours & Co., Inc. for their "**DuPont Sentry Glass® Interlayer**" dated 05/26/10, expiring on 01/14/12.


Manuel Perez, P.E.
Product Control Examiner
NOA No. 11-1021.10
Expiration Date: July 03, 2013
Approval Date: December 22, 2011

Marvin Windows and Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of conformance complying with the FBC-2007 and FBC-2010, dated October 17, 2011, signed and sealed by Warren W. Schaefer, P.E.
2. Statement letter of no financial interest, dated October 17, 2011, signed and sealed by Warren W. Schaefer, P.E.
3. Laboratory compliance letter for Test Report No. **ATI 77780.01-201-18** issued by Architectural Testing, Inc., dated 01/28/08, signed and sealed by Joseph A. Reed, P.E.
4. Test Proposal **#07-3071** issued by BCCO dated 06/21/07, revised on 07/02/07, signed by Manuel Perez, P.E.

G. OTHERS

1. Notice of Acceptance No. **08-0213.08**, issued to Marvin Windows and Doors for their Series "StormPlus IZ4 Casemaster" Aluminum Clad Wood Fixed Window – L.M.I., approved on 07/03/08 and expiring on 07/03/13.



Manuel Perez, P.E.
Product Control Examiner

NOA No. 11-1021.10

Expiration Date: July 03, 2013

Approval Date: December 22, 2011

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S).
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE WINDOWS.
7. ALL ANCHORS SECURING WINDOW FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_D = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_D = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
11. ALL WOOD MEMBERS OF WINDOWS THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC SECTION 2326.

FRAME CORNERS: THE SIDE WOOD MEMBERS ARE BUTTED TO THE HEAD & SILL MEMBERS, SECURED WITH THREE(3) GS16 1/2 X 1 1/2" STAPLES THROUGH THE HEAD & SILL INTO THE JAMB & ONE(1) 14 GA. 1/2 X 2" STAPLE THROUGH THE JAMB INTO THE HEAD & SILL & SEALED WITH SEALANT.

FRAME CLADDING CORNERS: CLADDING IS MITERED TOGETHER & JOINED WITH A CORNER KEY PART NO. 37A.

SASH CORNERS: SASH MEMBERS ARE MORTISED & TENONED AND SECURED WITH ONE(1) GS16 X 1 1/8" STAPLE.

SASH CALADDING CORNERS: CLADDING IS MITERED TOGETHER & JOINED WITH A CORNER KEY PART NO. 37B.

FRAME CORNERS: THE SIDE WOOD MEMBERS ARE BUTTED TO THE HEAD & SILL MEMBERS & SECURED WITH NO. 7 X 2" SCREWS (3 AT SQUARE CORNERS; 4 AT SHAPED CORNERS) AND SEALED WITH SEALANT.

FRAME CLADDING CORNERS: CLADDING IS MITERED TOGETHER & JOINED WITH A CORNER KEY PART NO. 37C WHICH IS SCREWED CLAD TO KEY WITH 4 NO. 7 X 1/2" SCREWS (2 PER KEY LEG).

SASH CORNERS: SASH MEMBERS ARE BUTTED TOGETHER, JOINED WITH 2 NO. 7 X 2" TRIM HEAD SCREWS & SEALED WITH SEALANT.

SASH CALADDING CORNERS: MITER CUT, BUTTED TOGETHER AND SEALED WITH SEALANT

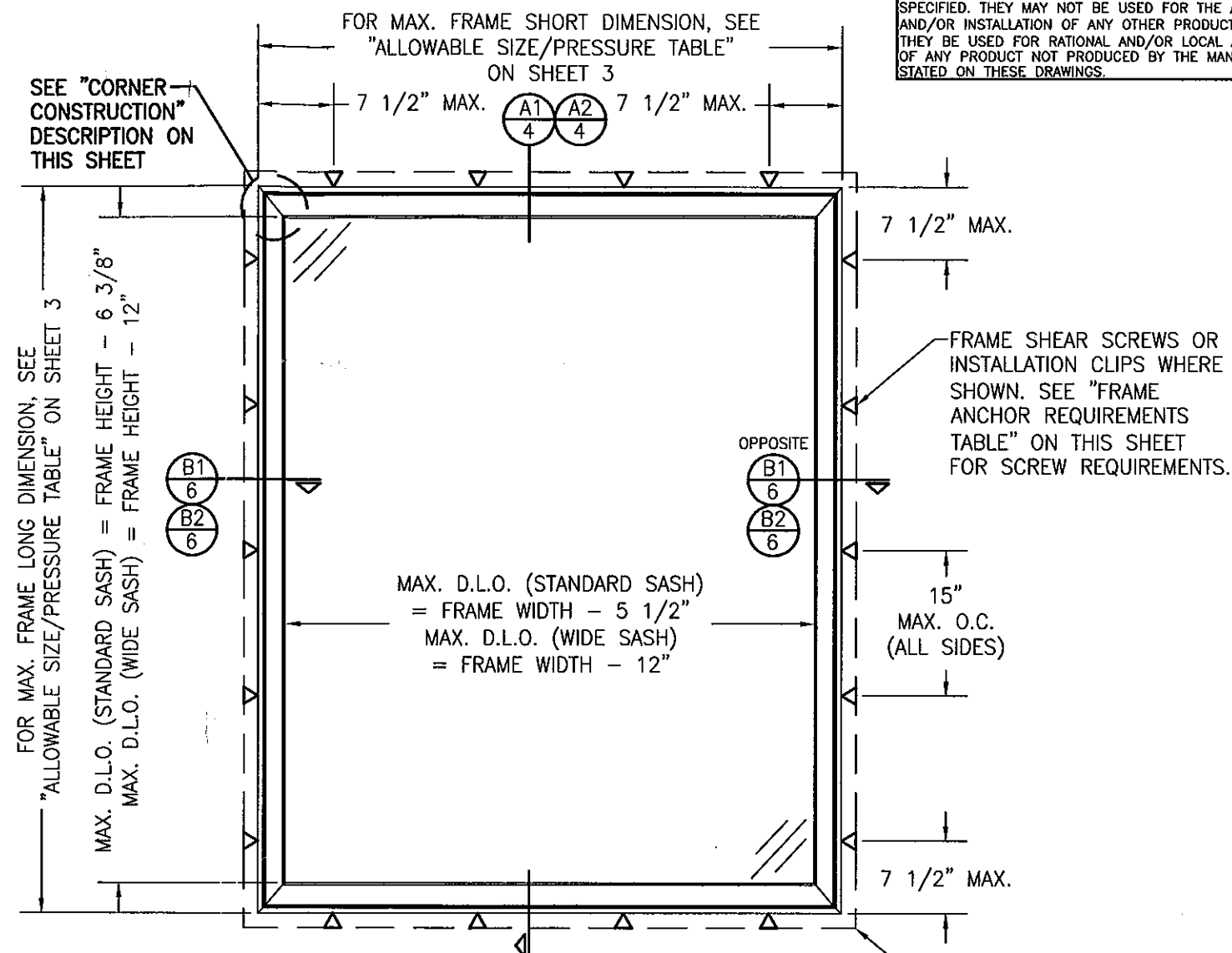
FRAME CORNERS: THE SIDE WOOD MEMBERS ARE BUTTED TO THE HEAD & SILL MEMBERS & SECURED WITH NO. 7 X 2" SCREWS (3 AT SQUARE CORNERS; 4 AT SHAPED CORNERS) AND SEALED WITH SEALANT.

FRAME CLADDING CORNERS: CLADDING IS MITERED TOGETHER & JOINED WITH A CORNER KEY PART NO. 37C WHICH IS SCREWED CLAD TO KEY WITH 4 NO. 7 X 1/2" SCREWS (2 PER KEY LEG).

SASH CORNERS: SASH MEMBERS ARE BUTTED TOGETHER, JOINED WITH ONE NO. 10 X 6" SCREW.

SASH CLADDING CORNERS: SQUARE CUT,BUTTED TOGETHER AND SEALED WITH SEALANT

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SHEAR SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 X 1 1/2" SMS	1 3/8"	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILLING SCREW	FULL	1/2"
(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS, HILTI KWIK-CON II OR POWERS RAWL TAPPER (HARDENED STEEL OR S.S.).			



(STANDARD SASH CONDITION SHOWN, WIDE SASH CONDITION ALSO APPLIES)

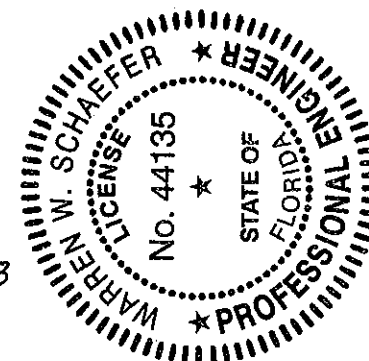
SCALE: $3/4" = 1'-0"$


ALLOWABLE DESIGN PRESSURE
(SINGLE STANDARD SASH &
SINGLE WIDE SASH WINDOWS)

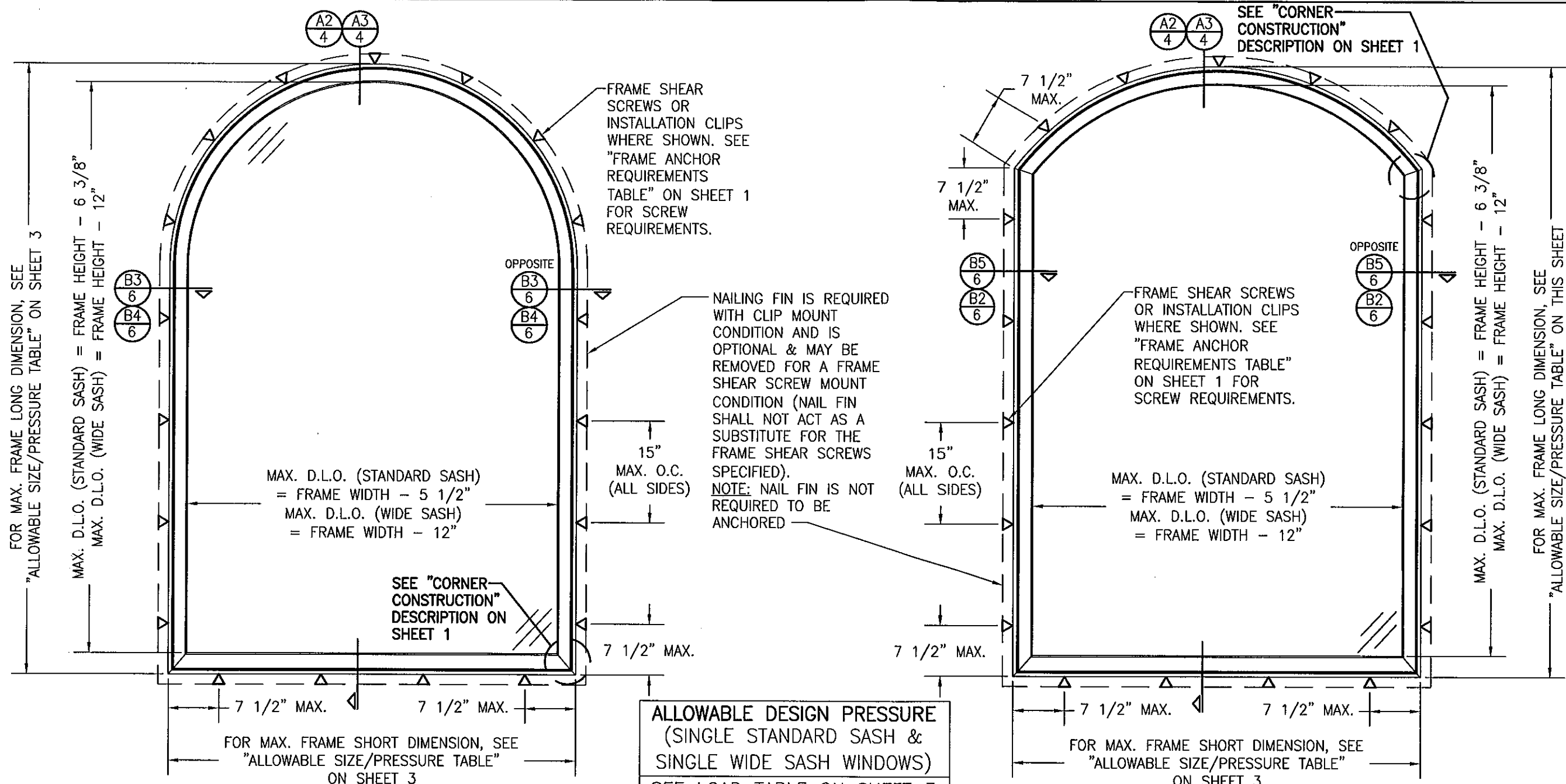
SEE LOAD TABLE ON SHEET 3

— NAILING FIN IS REQUIRED WITH CLIP MOUNT CONDITION AND IS OPTIONAL & MAY BE REMOVED FOR A FRAME SHEAR SCREW MOUNT CONDITION (NAIL FIN SHALL NOT ACT AS A SUBSTITUTE FOR THE FRAME SHEAR SCREWS SPECIFIED).
NOTE: NAIL FIN IS NOT REQUIRED TO BE ANCHORED

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021-10
Expiration Date July 3, 2013
By Muhammad Peraz
Miami Dade Product Control

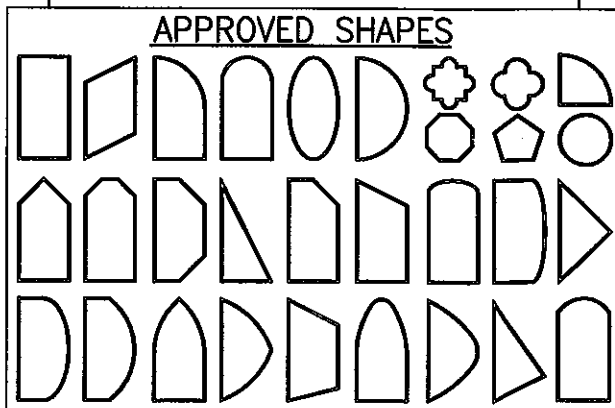


DRAWING NO. 1536	REV. A	SHEET NO. 1 OF 10	CERTIFICATION  OCT 17 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING TITLE CLAD CASEMASTER PICTURE STORMPLUS IZ4	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	MANUFACTURER MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044	NO. A1	REVISION DESCRIPTION UPDATE TO CURRENT STANDARDS	BY W.R.M.	DATE 10/17/11	PLOT: 1=16	DRAWN BY: W.R.M.	CHECKED BY: W.W.S.	DATE: 04/02/08



EXTERIOR ELEVATION
SINGLE EXTENDED LEG HALF ROUND TOP
FIXED CASEMENT WINDOW
 (STANDARD SASH CONDITION SHOWN, WIDE SASH CONDITION ALSO APPLIES)
 SCALE: 3/4" = 1'-0"

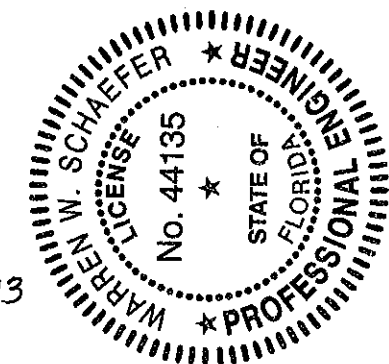
ALLOWABLE DESIGN PRESSURE
 (SINGLE STANDARD SASH &
 SINGLE WIDE SASH WINDOWS)
 SEE LOAD TABLE ON SHEET 3



NOTES:
 1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED ON THIS SHEET.
 2. ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.

EXTERIOR ELEVATION
SINGLE EYEBROW TOP FIXED
CASEMENT WINDOW
 (STANDARD SASH CONDITION SHOWN, WIDE SASH CONDITION ALSO APPLIES)
 SCALE: 3/4" = 1'-0"

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 11-102110
 Expiration Date July 31, 2013
 By *Manuel Perez*
 Miami Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-16		DATE: 04/02/08	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: CLAD CASEMASTER PICTURE STORMPLUS IZ4 MANUFACTURER: MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044 CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE 561-744-3424			
CERTIFICATION: <i>[Signature]</i> OCT 17 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135		DRAWING NO. 1536 REV. A SHEET NO. 2 OF 10	

ALLOWABLE WINDOW SIZE/PRESSURE TABLE (SINGLE STANDARD SASH WINDOW)























MAX. WINDOW FRAME LONG DIMENSION (IN.)	MAX. WINDOW FRAME SHORT DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)					
		GLASS OPTION "A"		GLASS OPTIONS "B"		GLASS OPTIONS "C"	
		POS.	NEG.	POS.	NEG.	POS.	NEG.
144	50	59.1	59.1	75.0	75.0	X	X
	48	63.1	63.1	75.0	75.0	X	X
	42	75.0	75.0	75.0	75.0	X	X
	36	75.0	80.0	75.0	80.0	X	X
	24	95.0	95.0	95.0	95.0	75.0	85.0
132	54	56.0	56.0	75.0	75.0	X	X
	48	65.7	65.7	75.0	75.0	X	X
	42	75.0	75.0	75.0	75.0	X	X
	39	75.0	80.0	75.0	80.0	X	X
	26	95.0	95.0	95.0	95.0	75.0	85.0
120	60	53.1	53.1	75.0	75.0	X	X
	54	59.7	59.7	75.0	75.0	X	X
	48	69.6	69.6	75.0	75.0	X	X
	43	75.0	80.0	75.0	80.0	X	X
	28	95.0	95.0	95.0	95.0	75.0	85.0
108	66	55.2	55.2	73.6	73.6	X	X
	60	59.8	59.8	75.0	75.0	X	X
	54	66.4	66.4	75.0	75.0	X	X
	48	75.0	75.7	75.0	75.0	X	X
	45	75.0	80.0	75.0	80.0	X	X
	36	95.0	95.0	95.0	95.0	75.0	85.0
96	72	58.6	58.6	75.0	75.0	X	X
	66	62.5	62.5	75.0	75.0	X	X
	60	67.7	67.7	75.0	75.0	X	X
	54	74.1	74.1	75.0	75.0	X	X
	49	75.0	80.0	75.0	80.0	X	X
	36	95.0	95.0	95.0	95.0	75.0	85.0

1. WINDOW SIZE DIMENSIONS SHOWN ARE MAXIMUM SIZES. SMALLER SIZES SHALL APPLY TO LOADS EQUAL TO THE NEAREST LARGER SIZE SHOWN IN TABLE.

2. CROSSED OUT BOXES DESIGNATE SIZES NOT ACCEPTABLE FOR THE RESPECTIVE OPTIONS.

SEE SHEET 8 FOR
GLASS OPTIONS

ALLOWABLE WINDOW SIZE/PRESSURE TABLE (SINGLE WIDE SASH WINDOW)

MAX. WINDOW FRAME LONG DIMENSION (IN.)	MAX. WINDOW FRAME SHORT DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)					
		GLASS OPTION "A"		GLASS OPTIONS "B"		GLASS OPTIONS "C"	
		POS.	NEG.	POS.	NEG.	POS.	NEG.
144	36	75.0	80.0	75.0	80.0		
	24	95.0	95.0	95.0	95.0	95.0	95.0
132	39	75.0	80.0	75.0	80.0		
	26	95.0	95.0	95.0	95.0	95.0	95.0
120	43	75.0	80.0	75.0	80.0		
	28	95.0	95.0	95.0	95.0	95.0	95.0
108	48	75.0	80.0	75.0	80.0		
	32	95.0	95.0	95.0	95.0	95.0	95.0
96	54	75.0	80.0	75.0	80.0		
	36	95.0	95.0	95.0	95.0	95.0	95.0
90	58	75.0	80.0	75.0	80.0		
	38	95.0	95.0	95.0	95.0	95.0	95.0
84	62	75.0	80.0	75.0	80.0		
	41	95.0	95.0	95.0	95.0	95.0	95.0
78	67	75.0	80.0	75.0	80.0		
	44	95.0	95.0	95.0	95.0	95.0	95.0
72.625	72	75.0	80.0	75.0	80.0		
	48	95.0	95.0	95.0	95.0	95.0	95.0
66	66	75.0	80.0	75.0	80.0		
	52	95.0	95.0	95.0	95.0	95.0	95.0
60	60	75.0	80.0	75.0	80.0		
	57	95.0	95.0	95.0	95.0	95.0	95.0

SEE SHEET 8 FOR
GLASS OPTIONS


1. WINDOW SIZE DIMENSIONS SHOWN ARE MAXIMUM SIZES. SMALLER SIZES SHALL APPLY TO LOADS EQUAL TO THE NEAREST LARGER SIZE SHOWN IN TABLE.

2. CROSSED OUT BOXES DESIGNATE SIZES NOT ACCEPTABLE FOR THE RESPECTIVE OPTIONS.

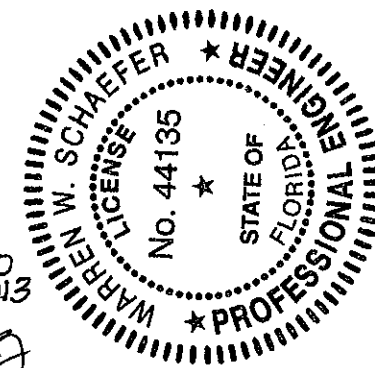
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-16	DATE: 04/02/08

[illegible]

DRAWING TITLE	CLAD CASEMASTER PICTURE STORMPLUS IZ4	
	CONSULTANTS	MANUFACTURER
	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044

CERTIFICATION 	OCT 17 2011	
	WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.	
1536	A	
SHEET NO.		
3	OF	10

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021-10
Expiration Date 12/3/2013
By: Marcos Perez
Miami Dade Product Control

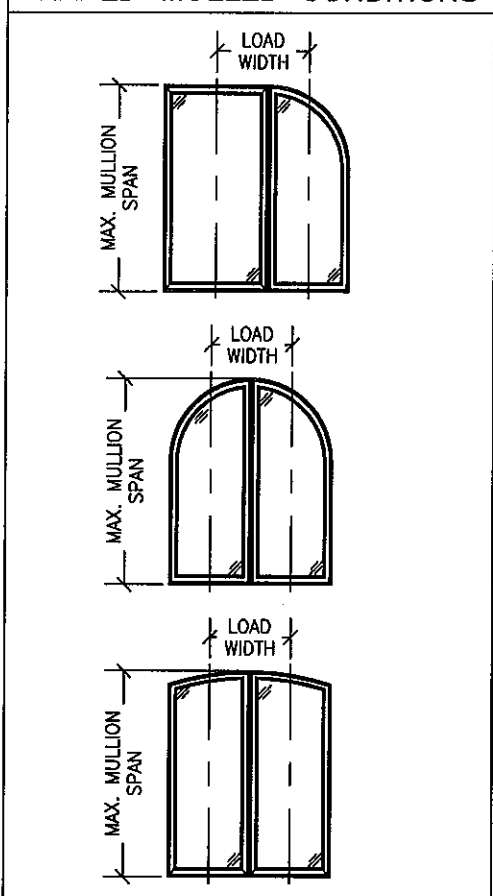


MULLION ALLOWABLE LOAD TABLE				
MAXIMUM MULLION SPAN (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (POS. & NEG. PSF)		
		NON-REINFORCED MULLION	REINFORCED MULLION	
			4 ANCHORS	6 ANCHORS
96	72		47.9	57.2
	66		49.8	59.4
	60		52.2	62.4
	54		55.5	66.3
	48		59.9	71.5
	42		65.7	78.4
	36		73.7	88.0
	30		85.1	95.0
	24		95.0	95.0
	72		53.2	63.6
90	66		55.0	65.7
	60		57.5	68.6
	54		60.8	72.6
	48		65.3	78.0
	42		71.4	85.3
	36		79.8	95.0
	30		91.9	95.0
	24		95.0	95.0
	72		59.9	71.5
	66		61.5	73.4
84	60		63.9	76.3
	54		67.2	80.3
	48		71.8	85.8
	42		78.2	93.4
	36		87.1	95.0
	30		95.0	95.0
	72		68.4	81.7
	66		69.7	83.2
	60		71.8	85.8
	54		75.1	89.7
78	48		79.8	95.0
	42		86.4	95.0
	36		95.0	95.0
	72 OR MORE		79.8	95.0
72	66		80.4	95.0
	60		82.1	95.0
	54		85.1	95.0
	48		89.8	95.0
	42		95.0	95.0
	71 OR MORE	67.4	82.1	95.0
	66	68.2	82.5	95.0
	60	70.0	84.1	95.0
	54	72.5	87.1	95.0
	48	76.3	91.7	95.0
71 1/8	42	82.0	95.0	95.0
	36	90.3	95.0	95.0
	30	95.0	95.0	95.0
	66 OR MORE	79.1	95.0	95.0
	60	79.7	95.0	95.0
	54	81.8	95.0	95.0
	48	85.4	95.0	95.0
	42	91.1	95.0	95.0
	36	95.0	95.0	95.0
	66			
66	60 OR MORE	95.0	95.0	95.0
	60			
	54			
	48			
	42			
	36			
	60			
	60 OR MORE			
	60			
	54			

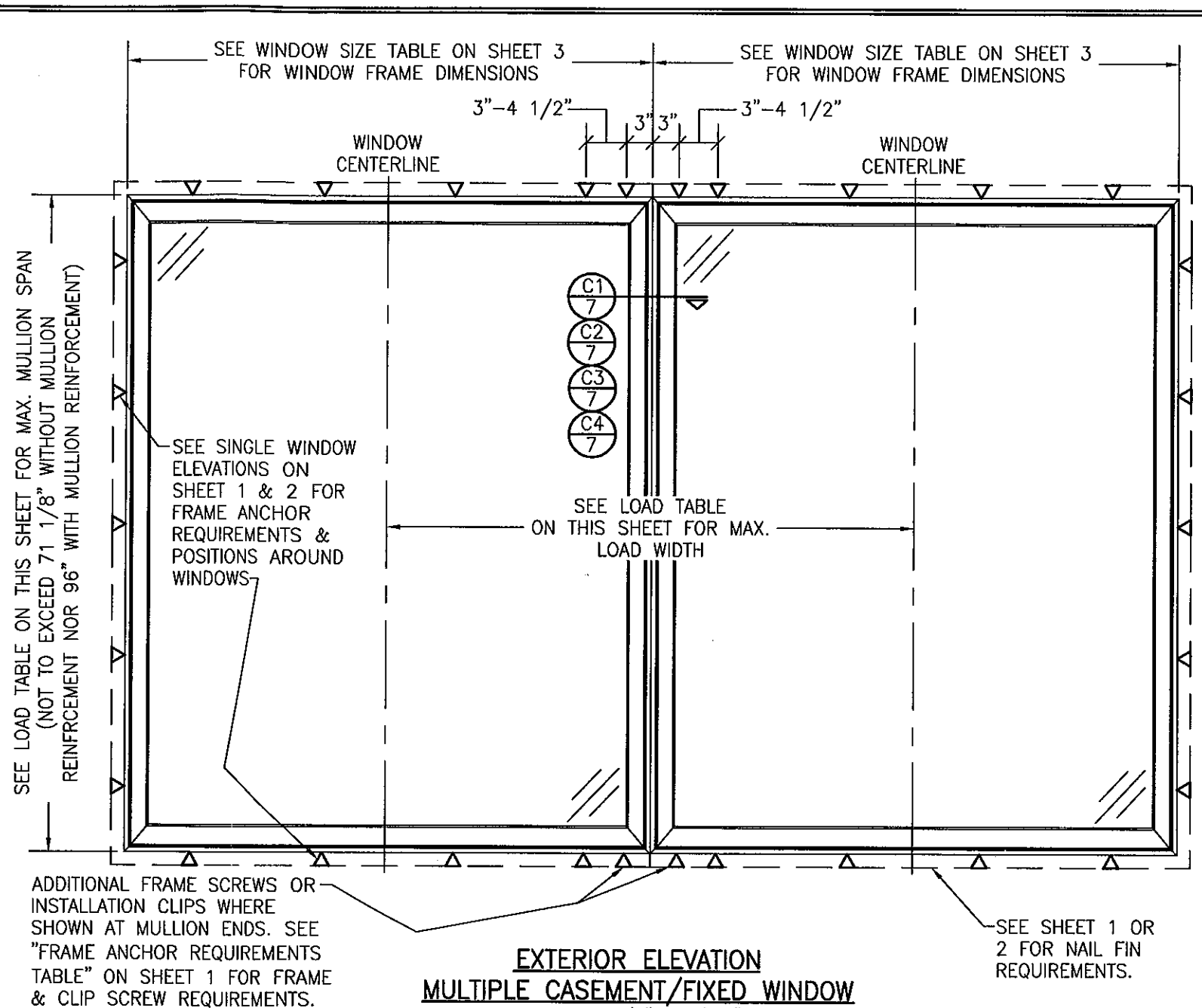
TABLE NOTES:
1. LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT ALLOWED FOR THE INDIVIDUAL WINDOW SHALL CONTROL AS ALLOWABLE FOR THE OVERALL UNIT.
2. ADD 3/8" TO LOAD WIDTH VALUES IN THIS TABLE WHEN 3/8" ALUMINUM REINFORCEMENT PLATE IS USED.
3. CROSSED OUT BOXES DESIGNATE SIZES NOT ACCEPTABLE FOR THE RESPECTIVE OPTIONS.

FOR NON-REINFORCED MULLION CONDITIONS, SEE SECTIONS C1/7 & C3/7. FOR REINFORCED MULLION CONDITIONS, SEE SECTIONS C2/7 & C4/7.

EXAMPLES OF SIDE-BY-SIDE SHAPED MULLED CONDITIONS



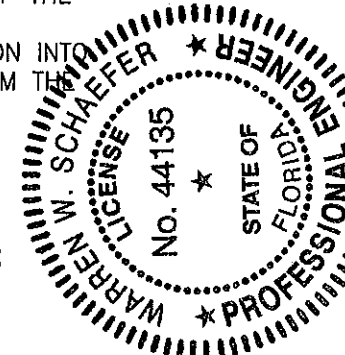
1. WINDOW SHAPES OTHER THAN THOSE SHOWN MAY APPLY PROVIDING THEY ARE APPLICABLE TO THOSE SHOWN ON SHEET 2.
2. SHAPED WINDOWS MAY ALSO BE MULLED TO RECTANGULAR WINDOWS AS TRANSOMS UNDER THE SAME RESTRICTIONS AS SIDE BY SIDE CONDITION SHOWN IN ELEVATION.



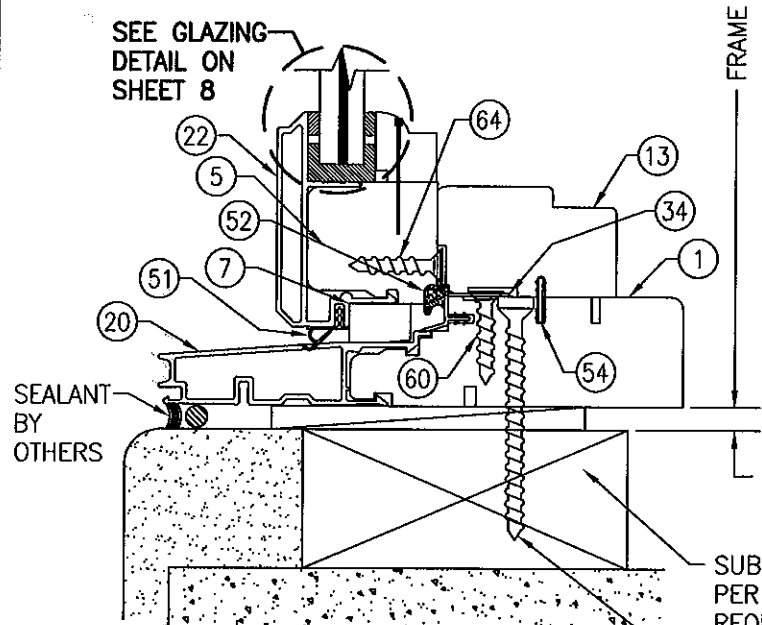
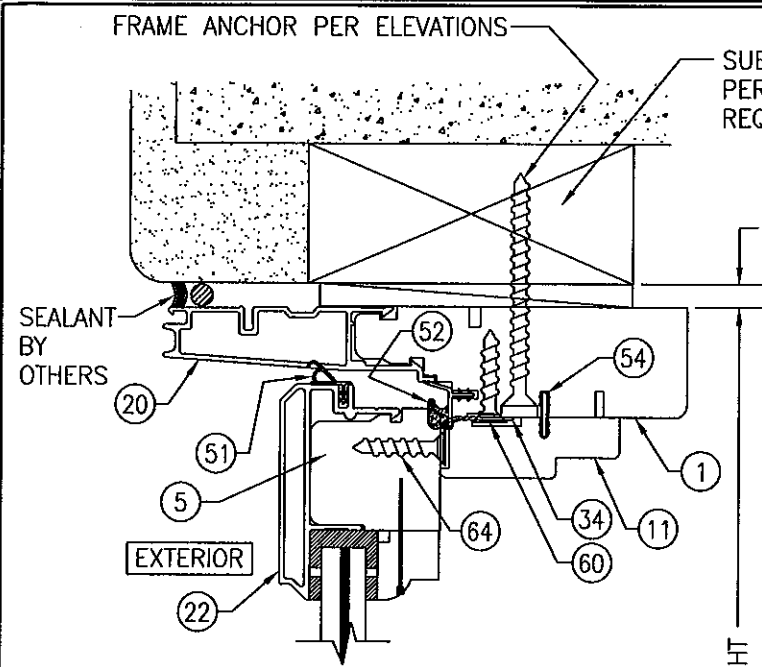
EXTERIOR ELEVATION
MULTIPLE CASEMENT/FIXED WINDOW
SCALE: 3/4" = 1'-0"
(RECTANGULAR WINDOW SHOWN, SHAPED WINOWS ALSO APPLY. SEE "APPROVED SHAPED MULLED CONDITIONS" TABLE ON THIS SHEET)
(STANDARD SASH CONDITION SHOWN, WIDE SASH CONDITION ALSO APPLIES)

- MULTIPLE UNIT NOTES:
1. FOR ALL DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATIONS.
 2. MULLION MAY BE HORIZONTAL OR VERTICAL PROVIDING WINDOW SIZES ARE RESTRICTED AS SHOWN IN THIS ELEVATION.
 3. IF VERTICALLY STACKED, THE MANUFACTURER SHALL INSURE THAT THE DEAD LOAD WEIGHT OF THE WINDOWS CAN NOT CAUSE UNDUE FAILURE.
 4. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERED FROM THE WINDOWS & THEIR MULLIONS.
 5. INDIVIDUAL WINDOW SIZES SHALL BE AS SPECIFIED IN THE SINGLE WINDOW ELEVATION.

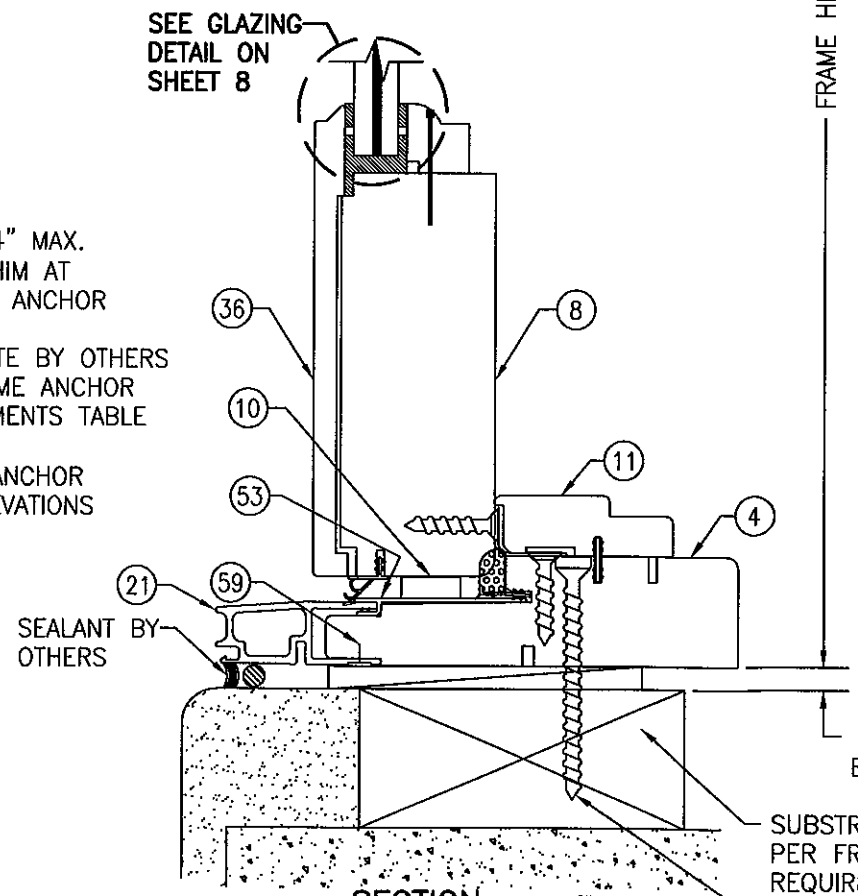
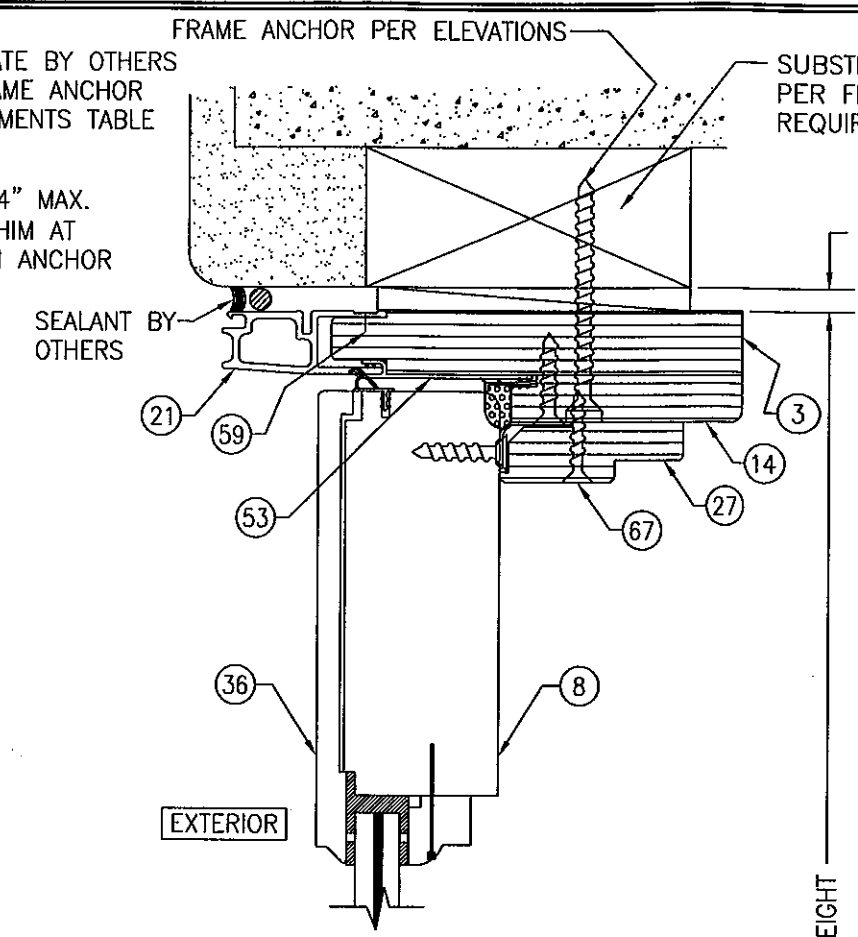
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021-10
Expiration Date JULY 3, 2013
By *Warren W. Schaefer*
Miami/Dade Product Control



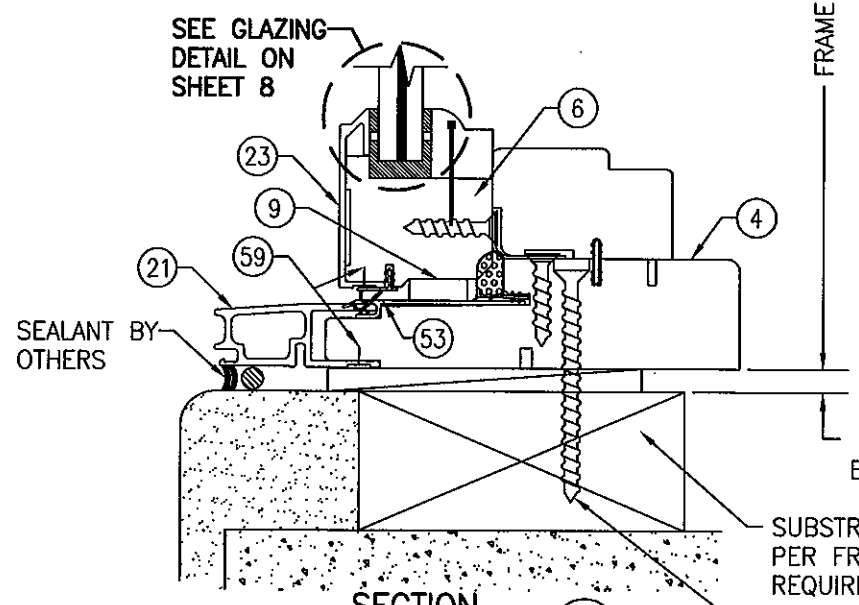
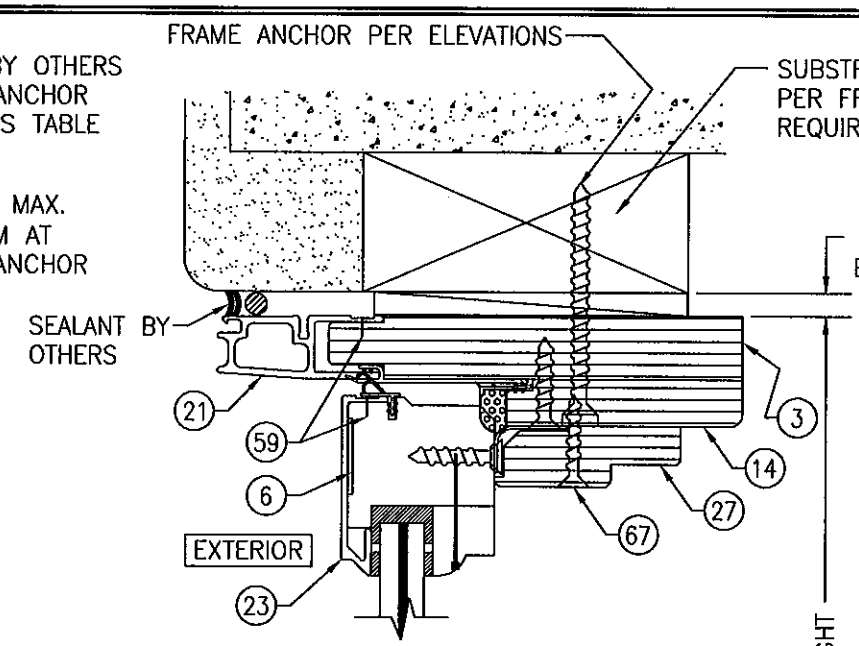
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 04/02/08	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: CLAD CASEMASTER PICTURE STORMPLUS IZ4			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: MARVIN WINDOWS & DOORS	
7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418		HIGHWAY 11; P.O. BOX 100	
PHONE: 561-744-3424		WARROAD, MN 56763	
		800-346-5044	
CERTIFICATION: <i>Warren W. Schaefer</i>		P.E.	
DATE: OCT 17 2011			
DRAWING NO. 1536		REV. A	
SHEET NO. 4		OF 10	



SECTION A1/5
SCALE: 1/2 FULL
(RECTANGULAR STANDARD SASH CONDITION)

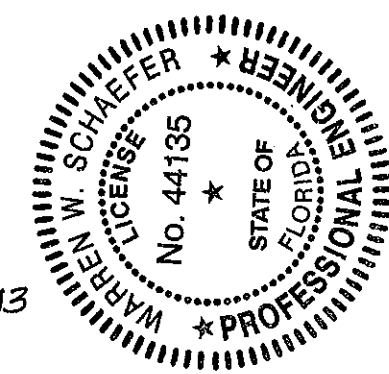


SECTION A2/5
SCALE: 1/2 FULL
(RECTANGULAR OR SHAPED WIDE SASH CONDITION)
FOR DETAILS NOT SHOWN SEE SECTION A1/5

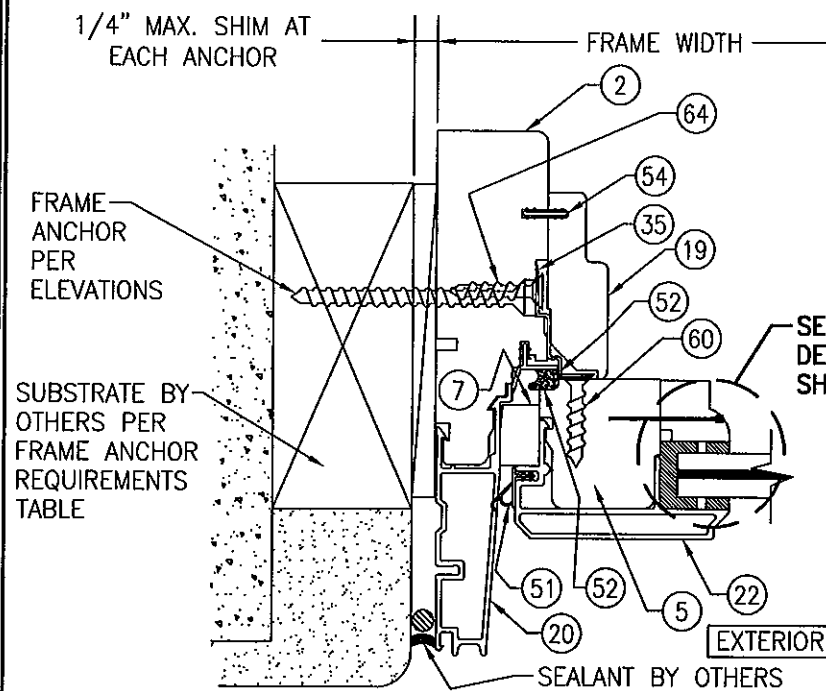


SECTION A3/5
SCALE: 1/2 FULL
(SHAPED STANDARD SASH CONDITION)
FOR DETAILS NOT SHOWN SEE SECTION A1/5

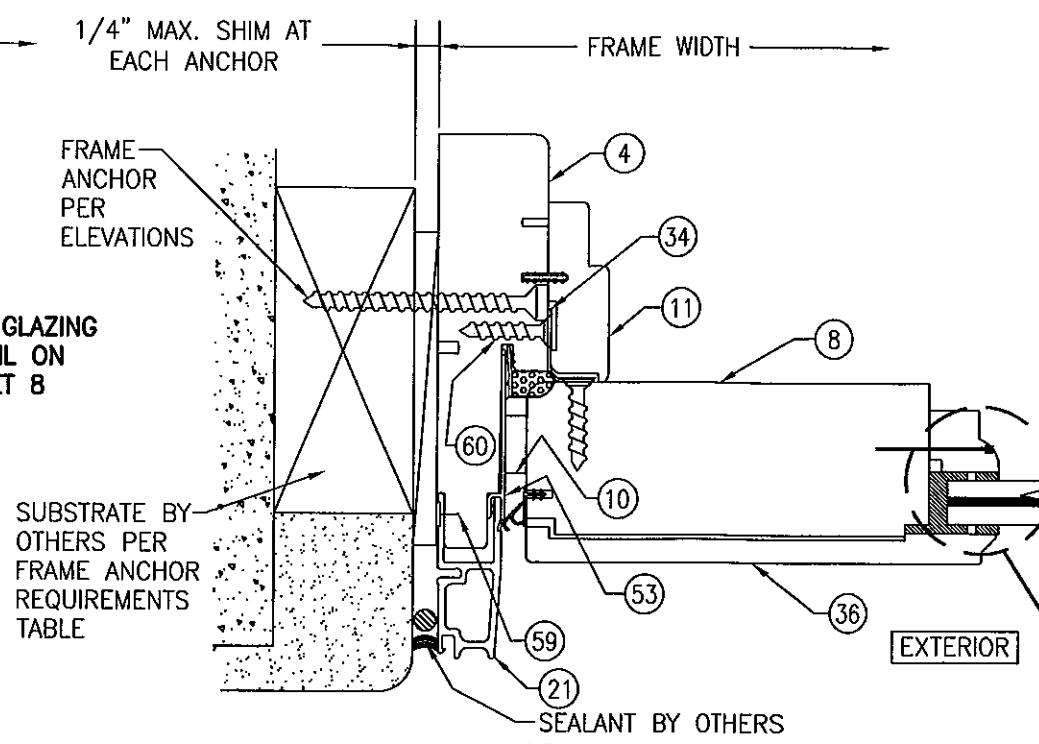
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021-10
Expiration Date July 3, 2013
By *Maurel Cruz*
Miami Made Product Control



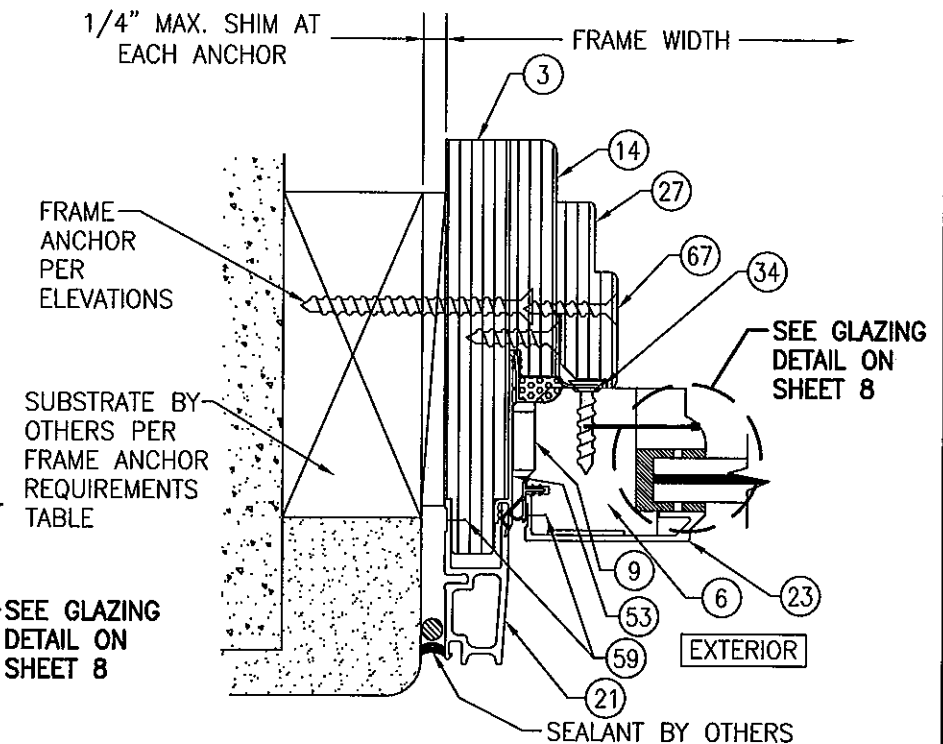
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/02/08	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: CLAD CASEMASTER PICTURE STORMPLUS IZ4			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: MARVIN WINDOWS & DOORS	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CERTIFICATION: <i>Oct 17 2011</i>		By <i>Maurel Cruz</i>	
DRAWING NO. 1536		REV. A	
SHEET NO. 5		OF 10	



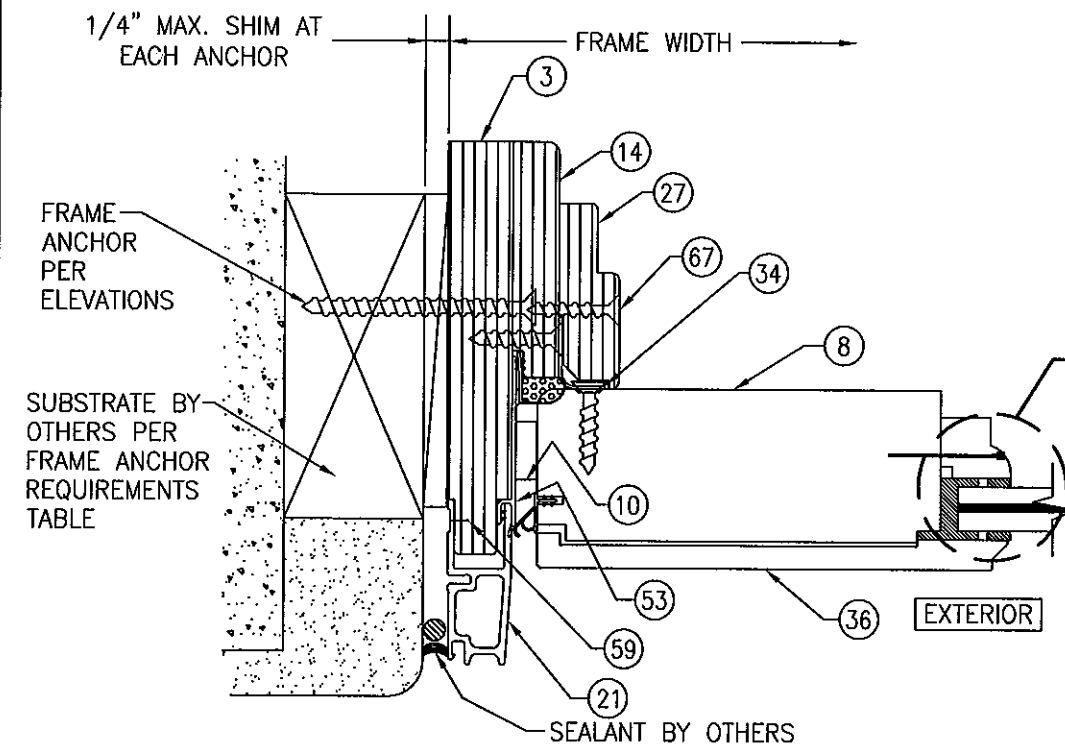
SECTION B1
SCALE: 1/2 FULL
(RECTANGULAR STANDARD SASH CONDITION)



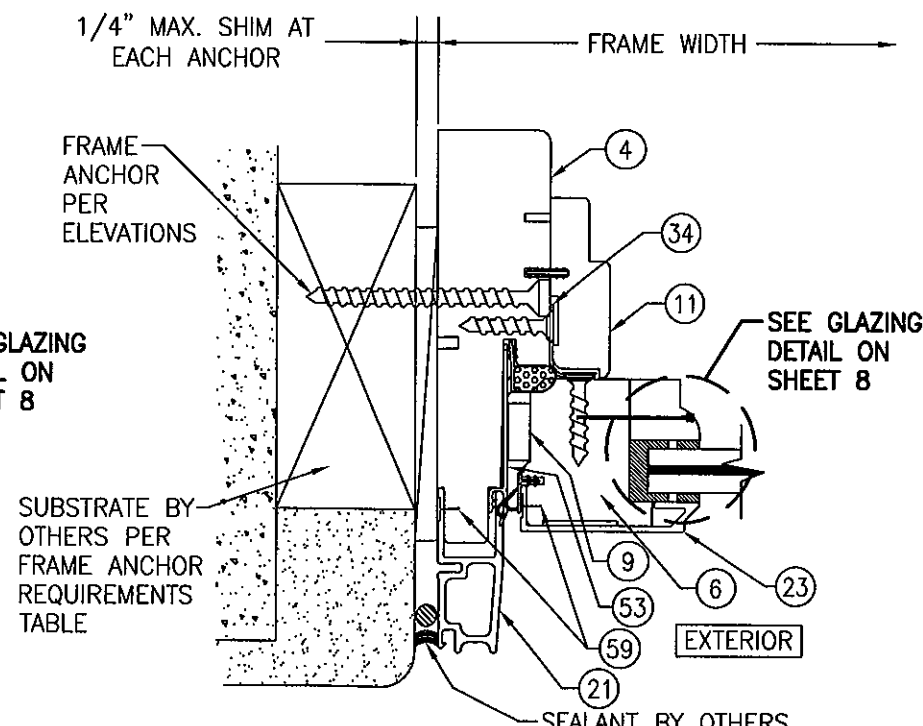
SECTION B2
SCALE: 1/2 FULL
(RECTANGULAR OR SHAPED WIDE SASH CONDITION)



SECTION B3
SCALE: 1/2 FULL
(SHAPED STANDARD SASH CONDITION)
FOR DETAILS NOT SHOWN SEE SECTION B1/6

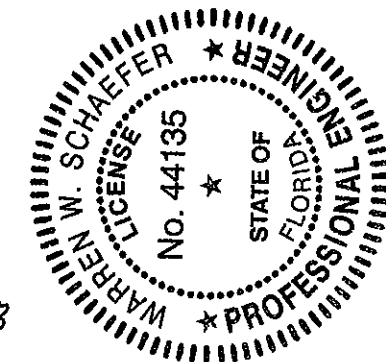


SECTION B4
SCALE: 1/2 FULL
(SHAPED WIDE SASH CONDITION)
FOR DETAILS NOT SHOWN SEE SECTION B1/6

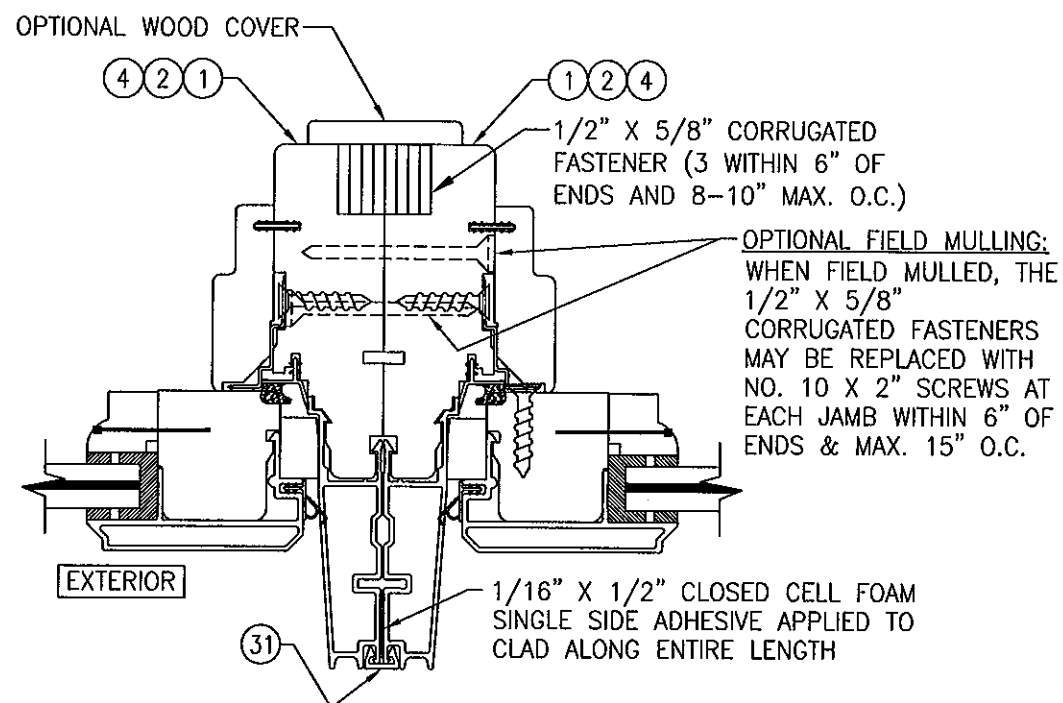


SECTION B5
SCALE: 1/2 FULL
(SHAPED STANDARD SASH CONDITION)
FOR DETAILS NOT SHOWN SEE SECTION B1/6

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021.10
Expiration Date 10/23/2013
By *Manuel Perez*
Miami Made Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 04/02/08	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: CLAD CASEMASTER PICTURE STORMPLUS IZ4			
MANUFACTURER: MARVIN WINDOWS & DOORS HIGHWAY 11, P.O. BOX 100 WARROAD, MN 56763 800-346-5044			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION	OCT 17 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135		
DRAWING NO.	REV.	SHEET NO.	
1536	A	6 OF 10	



SECTION

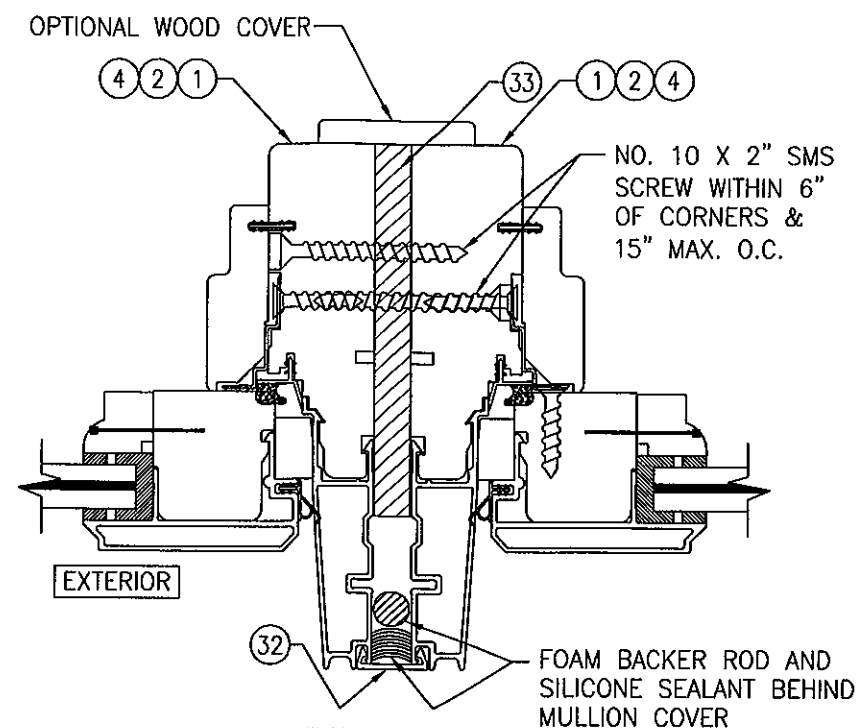
SCALE: 1/2 FULL

$$\frac{C1}{7}$$

(NON-REINFORCED MULLION WITH STANDARD SASH)

(FOR DETAILS NOT SHOWN SEE OTHER SECTIONS)

(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE JOINED THE SAME)



SECTION

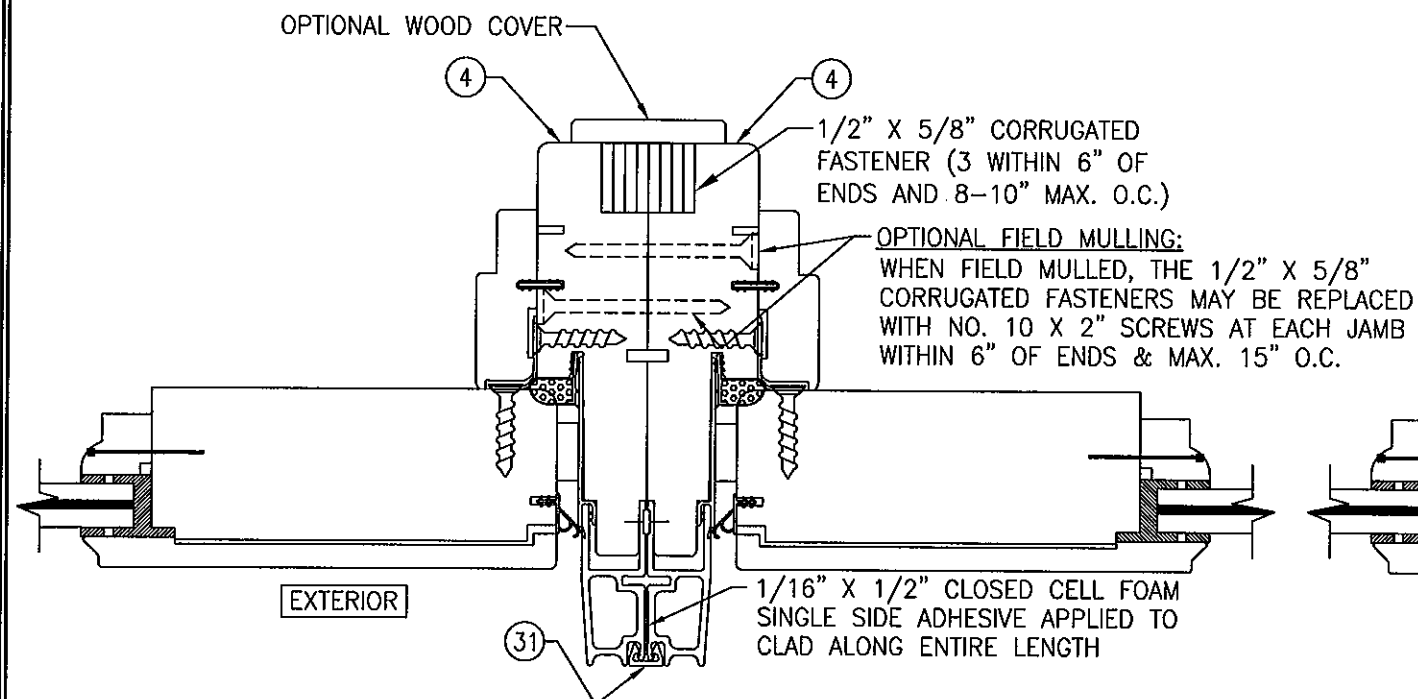
SCALE: 1/2 FULL

C2
7

(REINFORCED MULLION WITH STANDARD SASH)

(FOR DETAILS NOT SHOWN SEE OTHER SECTIONS)

(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE JOINED THE SAME)



SECTION

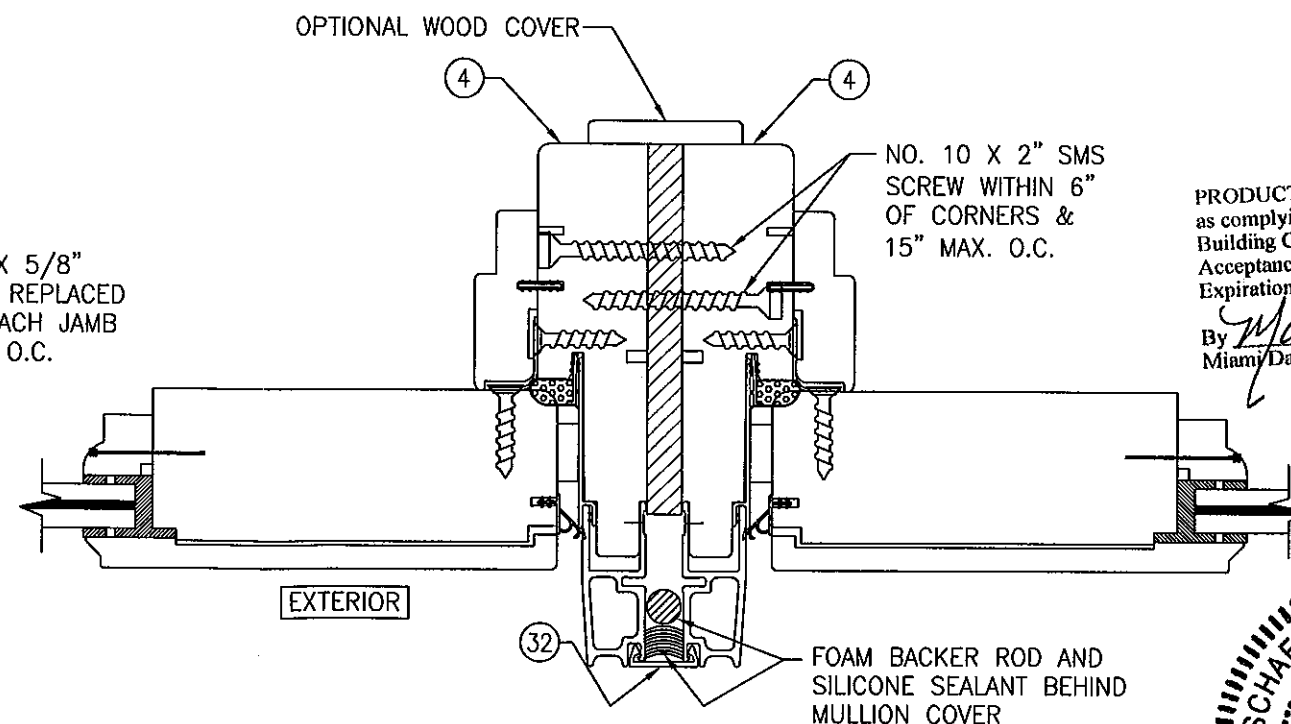
SCALE: 1/2 FULL

C3
7

(NON-REINFORCED MULLION WITH WIDE SASH)

(FOR DETAILS NOT SHOWN SEE OTHER SECTIONS)

(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW CONDITIONS ARE JOINED THE SAME)



SECTION

SCALE: 1/2 FULL

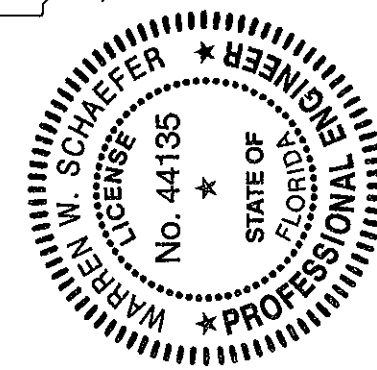
C4

(REINFORCED MULLION WITH WIDE SASH)

(FOR DETAILS NOT SHOWN SEE OTHER SECTIONS)

(RECTANGULAR WINDOW CONDITION SHOWN; SHAPED WINDOW
CONDITIONS ARE JOINED THE SAME)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021.10
Expiration Date JULY 3, 2013
By Manuel Perez
Miami-Dade Product Control

[illegible]

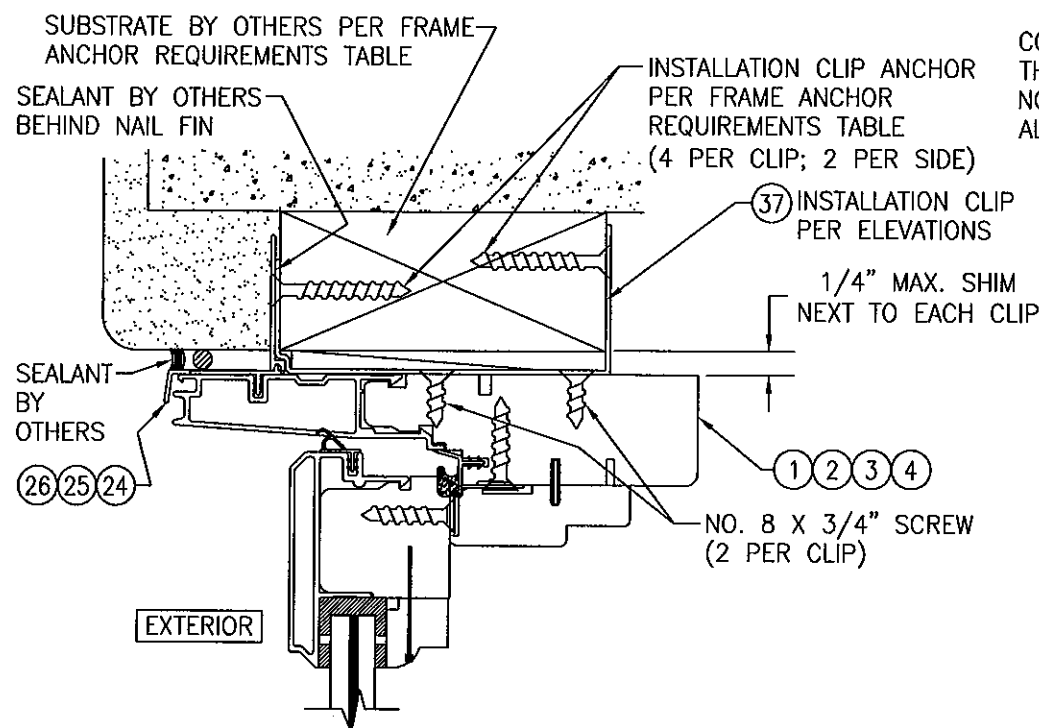
DRAWING FILE

MARVIN WINDOWS & DOORS
HIGHWAY 11; P.O. BOX 100
WARROAD, MN 56763
800-346-5044

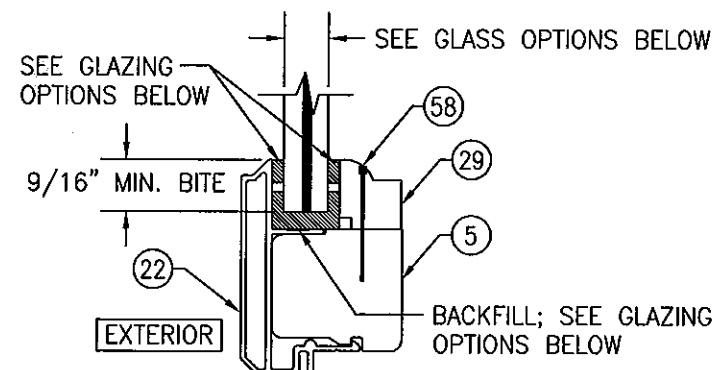
CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION
OCT 17 2011
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

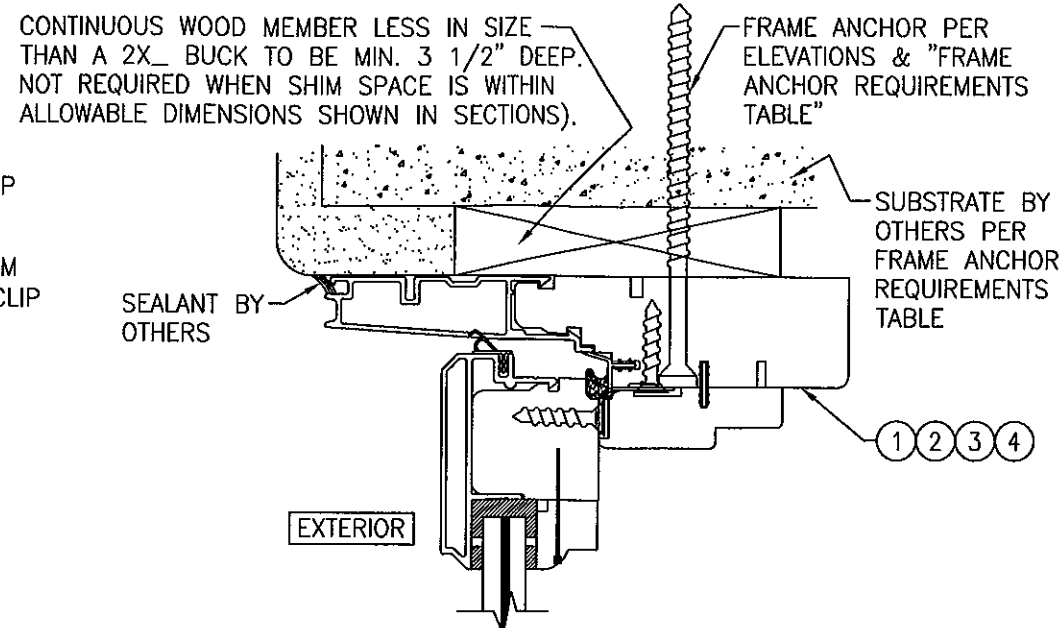
DRAWING NO.	REV.
1536	A
SHEET NO.	
7 OF 10	



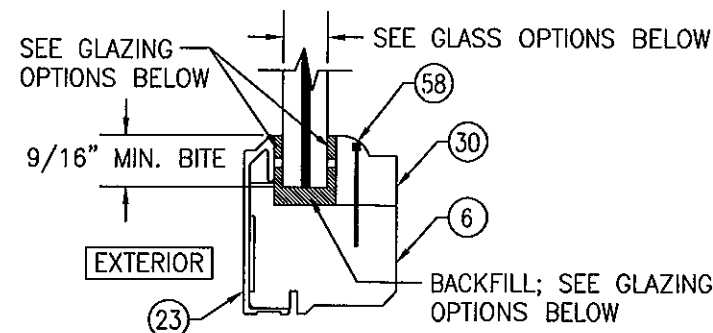
OPTIONAL INSTALLATION CLIP DETAIL
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



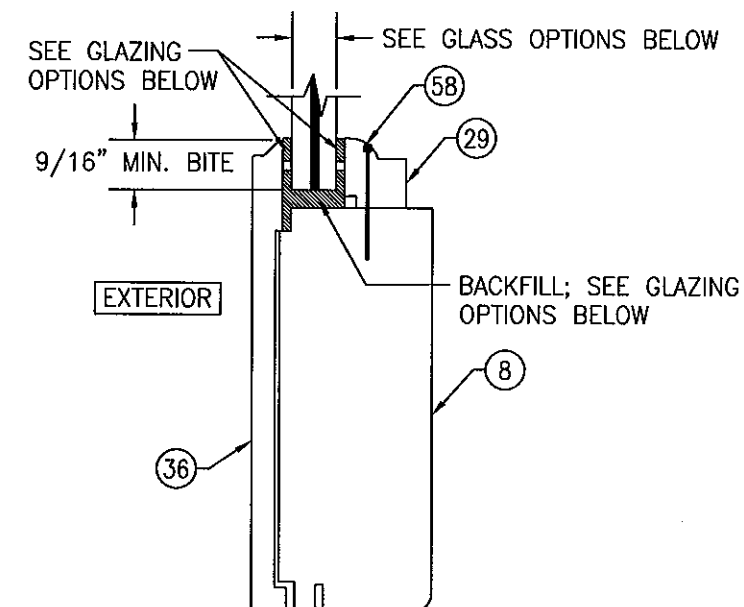
TYPICAL GLAZING DETAIL (RECTANGULAR WINDOW WITH STANDARD SASH)



OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



TYPICAL GLAZING DETAIL (SHAPED WINDOW WITH STANDARD SASH)



TYPICAL GLAZING DETAIL (RECTANGULAR OR SHAPED WINDOW WITH WIDE SASH)

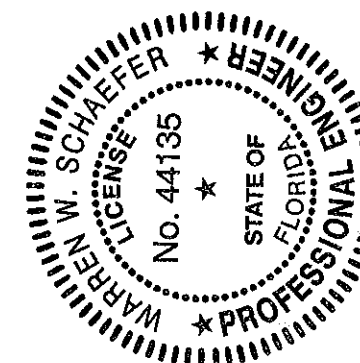
GLASS OPTIONS

GLASS OPTION A: 9/16" THICK LAMINATED GLASS (1/4" AN./0.09" DUPONT SG/1/4" AN.)
GLASS OPTION B: 9/16" THICK LAMINATED GLASS (1/4" HT.ST./0.09" DUPONT SG/1/4" HT.ST.)
GLASS OPTION C: 3/8" THICK LAMINATED GLASS (5/32" AN./0.090" DUPONT SG/5/32" AN.)

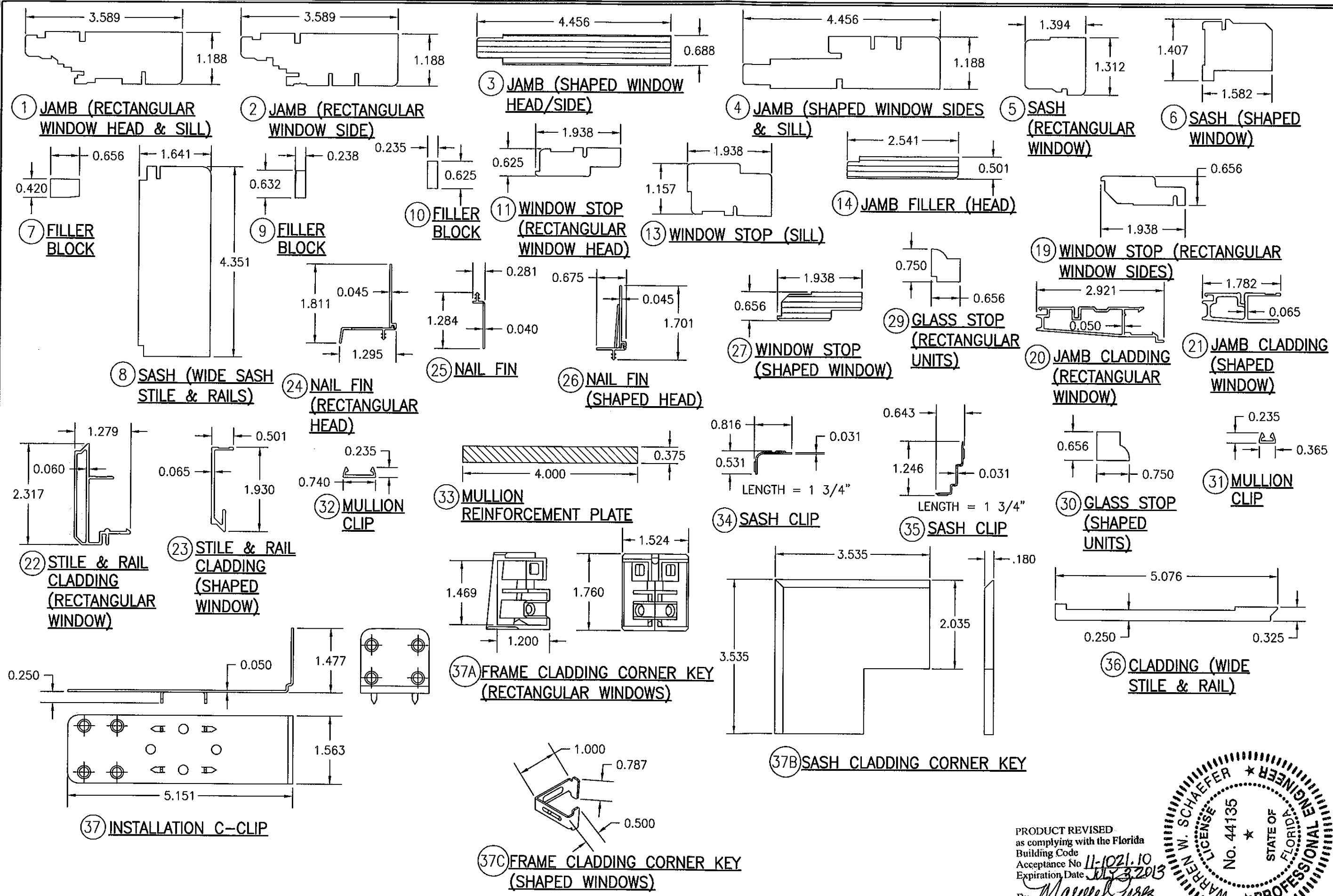
GLAZING OPTIONS

GLAZING OPTION A: POLYOLEFIN FOAM WITH ACRYLIC ADHESIVE GLAZING TAPE AT EXTERIOR & INTERIOR WITH DOW 995 BACKFILL
GLAZING OPTION B: GE RAPID STRENGTH EXTERIOR, INTERIOR & BACKFILL

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021-10
Expiration Date JULY 3, 2013
By *Manuel Perez*
Miami Made Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/02/08	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: CLAD CASEMASTER PICTURE STORMPLUS IZ4			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MARVIN WINDOWS & DOORS	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CERTIFICATION	OCT 17 2011		
DRAWING NO. 1536		REV. A	
SHEET NO. 8		OF 10	



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/02/08	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: CLAD CASEMASTER PICTURE STORMPLUS IZ4			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MARVIN WINDOWS & DOORS	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CERTIFICATION		OCT 17 2011	
WARREN W. SCHAEFER LICENSE No. 44135 STATE OF FLORIDA PROFESSIONAL ENGINEER		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1536		REV. A	
SHEET NO. 9		OF 10	

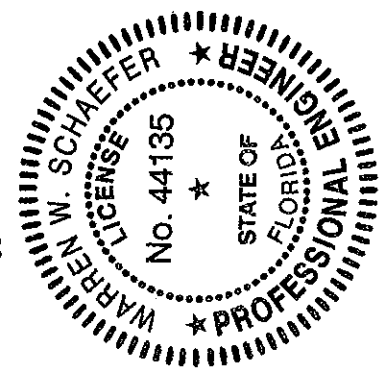
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021.10
Expiration Date 01/31/2013
By *Warren W. Schaefer*
Miami Made Product Control

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	JAMB (RECTANGULAR WINDOW HEAD & SILL)	* WOOD
2	JAMB (RECTANGULAR WINDOW SIDES)	* WOOD
3	JAMB (SHAPED WINDOW HEAD/SIDE)	LVL
4	JAMB (SHAPED WINDOW SIDES & SILL)	* WOOD
5	SASH (RECTANGULAR WINDOW)	* WOOD
6	SASH (SHAPED WINDOW)	* WOOD
7	FILLER BLOCK	* WOOD
8	SASH (WIDE SASH STILE & RAILS)	* WOOD
9	FILLER BLOCK	* WOOD
10	FILLER BLOCK	* WOOD
11	WINDOW STOP (RECTANGULAR WINDOW HEAD)	* WOOD
13	WINDOW STOP (SILL)	* WOOD
14	JAMB FILLER (SHAPED WINDOW HEAD)	LVL
19	WINDOW STOP (RECTANGULAR WINDOW SIDES)	WOOD
18	WINDOW STOP SKIN (SIDE JAMB)	WOOD VENEER
20	JAMB CLADDING (RECTANGULAR WINDOW)	6063-T5 ALUMINUM
21	JAMB CLADDING (SHAPED WINDOW)	6063-T5 ALUMINUM
22	STILE & RAIL CLADDING (RECTANGULAR WINDOW)	6063-T5 ALUMINUM
23	STILE & RAIL CLADDING (SHAPED WINDOW)	6063-T5 ALUMINUM
24	NAIL FIN (RECTANGULAR HEAD)	6063-T5 ALUMINUM
25	NAIL FIN	6063-T5 ALUMINUM
26	NAIL FIN (SHAPED HEAD)	6063-T5 ALUMINUM
27	WINDOW STOP (SHAPED WINDOW HEAD)	LVL
29	GLASS STOP	* WOOD
30	GLASS STOP	* WOOD
31	MULLION CLIP	6063-T5 ALUMINUM
32	MULLION CLIP	6063-T5 ALUMINUM
33	MULLION REINFORCEMENT PLATE	6061-T6 ALUMINUM
37	INSTALLATION C-CLIP	50 KSI GALV. STEEL
37A	FRAME CLAD CORNER KEY (RECTANGULAR WINDOWS)	NYLON
37B	SASH CLADDING CORNER KEY	5052 ALUMINUM
37C	FRAME CLAD CORNER KEY (SHAPED WINDOWS)	6063-T1 ALUMINUM

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
SEALS & SEALANTS		
51	SASH WEATHERSTRIP	RIGID GLASS FILLED POLYPROPOLENE BY INTEK
52	VINYL FRAME WEATHERSTRIP	BY AMSBURY
53	THERMAL BREAK	BY AMSBURY
54	CONNECTING BARB	PVC & GEON C70a0
MISC. FASTENERS		
58	F-18 x 1.125" BRAD NAIL	3" FROM CORNERS & MAX. 8" O.C.
59	GSN 18 X 1/2" S.S. STAPLE	3" FROM CORNERS & MAX. 6" O.C.
61	NO. 10-32 FH MACHINE SCREW	4 PER HINGE
62	NO. 8 X 1" SMS	2 PER SNUBBER
63	NO. 7 X 1/2" SMS	2 PER SNUBBER
66	NO. 8 X 1" SMS	2" FROM ENDS & 5" TO 8" O.C.
67	NO. 6 X 1" TRIM HEAD WOOD SCREW	2" FROM ENDS & 5" TO 8" O.C.

* ALL WOOD USED WITH TESTED UNITS IS MIN. GRADE 2 WESTERN PINE. ALTERNATE WOOD SPECIES TO PINE SHALL BE MIN. GRADE 2 WITH "E" = 1200000 PSI MIN. & "G" = 0.43 MIN
NOTE: ALL WOOD IS RECEIVED BY MARVIN WINDOWS & DOORS AS GRADE 2, BUT IS MACHINED BY MARVIN TO A SELECT GRADE USE.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1021.10
Expiration Date: 10/23/2013
By *Marcus Perez*
Miami/Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/02/08	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE CLAD CASEMASTER PICTURE STORMPLUS IZ4		MANUFACTURER MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		CERTIFICATION OCT 17 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1536		REV. A	
SHEET NO. 10 OF 10			